



A7

PATENT
Atty. Docket No. 1618.003DECLARATION FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: ELICITING HCV-SPECIFIC ANTIBODIES

the specification of which (check one) is attached hereto X was filed on December 1, 2000 as Application Serial No. 09/728,423, and was amended on (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s) Number	Country	Day/Month/Year Filed	Priority Claimed Yes No
--	---------	----------------------	---------------------------------

I hereby claim the benefit under Title 35, United States Code, §120 and/or §119(e) of any United States application(s) and/or provisional applications listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application Serial No.	Filing Date	Status
60/168,234	1 December 1999	Abandoned
60/185,055	25 February 2000	Abandoned

I hereby declare that all statements herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Michael Houghton

Inventor's signature M Houghton

Date 6/26/01

Residence Danville, California

Citizenship U.K.

Post Office Address 2405 Saddleback Drive, Danville, CA 94506

Full name of second inventor Mark Selby

Inventor's signature Mark Selby

Date 6/15/01

Residence San Francisco, California

Citizenship U.S.A.

Post Office Address 136 Galewood Circle, San Francisco, CA 94131

Full name of sole or third inventor Sergio Abrignani

Inventor's signature _____

Date _____

Residence Vagliagli, Italy

Citizenship Italy

Post Office Address Piazza Fabbrini 5, Vagliagli, Italy

Full name of fourth inventor Jens Martin Heile

Inventor's signature _____

Date _____

Residence Ludwigsburg, Germany

Citizenship German

Post Office Address Keltenstrasse 5, 71640 Ludwigsburg, Germany

Full name of sole or fifth inventor Derek O'Hagan

Inventor's signature 

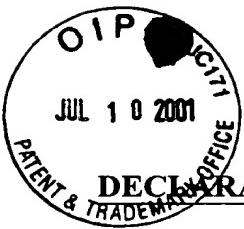
Date

6.21.01

Residence Berkeley, California

Citizenship U.K.

Post Office Address 2373 Woolsey Street, Berkeley, CA 94008



PATENT
Atty. Docket No. 1618.003

DECLARATION FOR PATENT APPLICATION

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the specification of which (check one) is attached hereto was filed on December 1, 2000 as Application Serial No. 09/728,423, and was amended on (if applicable).

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Full name of sole or first inventor Michael Houghton

Inventor's signature _____ Date _____

Residence Danville, California

Citizenship U.K.

Post Office Address 2405 Saddleback Drive, Danville, CA 94506

Full name of second inventor Mark Selby

Inventor's signature _____ Date _____

Residence San Francisco, California

Citizenship U.S.A.

Post Office Address 136 Galewood Circle, San Francisco, CA 94131

Full name of sole or third inventor Sergio Abrignani

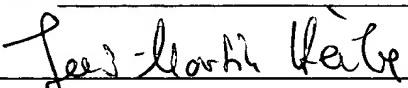
Inventor's signature _____ Date _____

Residence Vagliagli, Italy

Citizenship Italy

Post Office Address Piazza Fabbrini 5, Vagliali, Italy

Full name of fourth inventor Jens Martin Heile

Inventor's signature  Date 06/25/01

Residence Ludwigsburg, Germany

Citizenship German

Post Office Address Keltenstrasse 5, 71640 Ludwigsburg, Germany

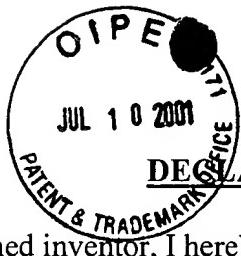
Full name of sole or fifth inventor Derek O'Hagan

Inventor's signature _____ Date _____

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PATENT
Atty. Docket No. 1618.003

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--	---------	----------------------	--

=====

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Application <u>Serial No.</u>	Filing Date	Status <u>Patented, Pending, Abandoned</u>
60/168,234	1 December 1999	Abandoned
60/185,055	25 February 2000	Abandoned

=====

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Full name of sole or first inventor Michael Houghton

Inventor's signature _____ Date _____

Residence Danville, California

Citizenship U.K.

Post Office Address 2405 Saddleback Drive, Danville, CA 94506

Full name of second inventor Mark Selby

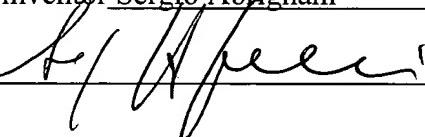
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Citizenship U.S.A.

Post Office Address 136 Galewood Circle, San Francisco, CA 94131

Full name of sole or third inventor Sergio Abrignani

Inventor's signature  Date 6/12/01

Residence Vagliagli, Italy

Citizenship Italy

Post Office Address Piazza Fabbrini 5, Vagliagli, Italy

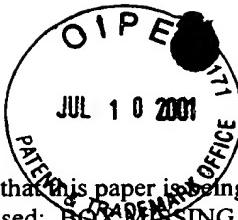
Full name of fourth inventor Jens Martin Heile

Inventor's signature _____ Date _____

Residence Ludwigsburg, Germany

Citizenship German

Post Office Address Keltenstrasse 5, 71640 Ludwigsburg, Germany



PATENT
Atty Dkt. No. 1618.003

I hereby certify that this paper is being deposited in the United States Postal Service as first class mail in an envelope addressed: BOSTON MISSING PARTS, Assistant Commissioner of Patent and Trademarks, Washington, D.C. 20231 on July 6, 2001.


Gyne Riser

Date


July 6, 2001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

MICHAEL HOUGHTON et al.

Serial No.: 09/728,423 Group Art: Unassigned
Filed: December 1, 2000 Examiner: Unassigned
For: ELICITING HCV-SPECIFIC ANTIBODIES

POWER OF ATTORNEY

Assistant Commissioner of Patents
and Trademarks
Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. §1.36, Chiron Corporation, the Assignee of the above-identified patent application hereby appoints the following attorneys and agents to prosecute this application and to transact all business in the Patent and Trademark Office in connection therewith.

Lisa A. Alexander - Reg. No. 41,576
Robert P. Blackburn - Reg. No. 30,447
Anne S. Dollard - Reg. No. 43,935
Joseph H. Guth - Reg. No. 31,261
Alisa A. Harbin - Reg. No. 33,895
Charlene A. Launer - Reg. No. 33,035

David P. Lentini - Reg. No. 33,944
Kimberlin L. Morley - Reg. No. 35,391
Roberta L. Robins - Reg. No. 33,208
Gary R. Fabian - Reg. No. 33,875
Dahna Pasternak - Reg. No. 41,411
Cathleen M. Rocco, Reg. No. 46,172

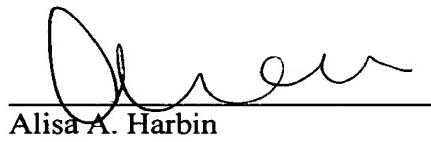
Please direct all correspondence and telephone calls regarding this application to the following:

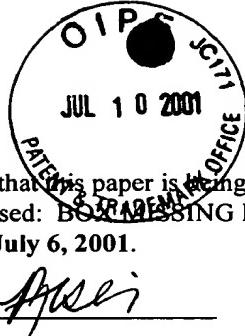
Chiron Corporation
Intellectual Property - R440
P.O. Box 8097
Emeryville, CA 94662-8097
(510) 923-2708

CHIRON CORPORATION

Dated: 6 July 2001

By:


Alisa A. Harbin
Assistant Secretary



PATENT
Atty. Dkt. No. 1618.003

I hereby certify that this paper is being deposited in the United States Postal Service as first class mail in an envelope addressed: BOX 8888, Assistant Commissioner of Patent and Trademarks, Washington, D.C. 20231 on July 6, 2001.


Gyne Riser


Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

MICHAEL HOUGHTON et al.

Serial No.: 09/728,423

Group Art: Unassigned

Filed: December 1, 2000

Examiner: Unassigned

For: ELICITING HCV-SPECIFIC ANTIBODIES

CERTIFICATE UNDER 37 C.F.R. § 3.73(b)

CHIRON CORPORATION

(Name of Assignee)

, a Corporation

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. [] the assignee of the entire right, title, and interest, or
2. [X] an assignee of an undivided part interest

in the patent application/patent identified above by virtue of either:

- A. [] An Assignment from the inventor(s) of the patent application/patent identified above.
The assignment was recorded in the Patent and Trademark Office at Reel _____,
Frame _____, or for which a copy thereof is attached.

OR

- B. [] A chain of title from the inventor(s) of the patent application/patent identified above
to the current assignee as shown below:

1. From: _____ To: _____
The document was recorded in the Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.
2. From: _____ To: _____
The document was recorded in the Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____
The document was recorded in the Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

[] Additional documents in the chain of title are listed on a supplemental sheet.

[X] Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (*i.e.*, the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the PTO. See MPEP 302-302.8]

The undersigned (whose title is supplied below) is empowered to act on behalf of the assignee.

Date: 6 July 2001

Name: Alisa A. Harbin

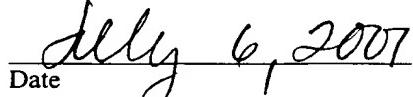
Title: Assistant Secretary, CHIRON CORPORATION

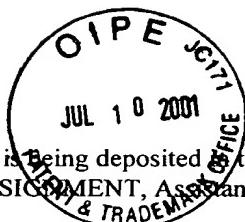
Signature: Alisa A. Harbin

PATENT
Atty. Dkt. 1618.003

I hereby certify that this paper is being deposited by the United States Postal Service as first class mail in an envelope addressed: BOX ASSIGNMENT, Assistant Commissioner of Patent and Trademarks, Washington, D.C. 20231 on July 6, 2001.


Gyne Riser


Date



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

MICHAEL HOUGHTON et al.

Serial No.: 09/728,423 Group Art: Unassigned
Filed : December 1, 2000 Examiner: Unassigned
For : ELICITING HCV-SPECIFIC ANTIBODIES

ASSIGNMENT DOCUMENT COVER LETTER

Box Assignment
Assistant Commissioner of Patents and Trademarks
Washington, D.C. 20231

1. The accompanying assignment covers the patent or application identified above.
 - No other patents or applications are covered by the assignment.
 - Other patents and/or applications are covered by the assignment as shown on the attached LIST OF PATENTS AND/OR APPLICATIONS COVERED BY ASSIGNMENT.

NAMES OF PARTY MAKING TRANSFER

2. Name 1: Derek O'Hagan

IDENTITY OF PARTY TO WHOM TRANSFER IS MADE

3. Transfer is being made to:

Chiron Corporation
4560 Horton Street
Emeryville, CA 94608-2916

INTENTION OF DOCUMENT

4. The accompanying document is an:

Assignment License
 Security Interest Other

 Execution Date: 06/21/01

COPY ONLY
DO NOT FORWARD
TO
ASSIGNMENT BRANCH

FEE PAYMENT

5. Total fee due \$40.00
6. Charge Deposit Account No. 03-1664 in the sum of \$40.00.
- Enclosed is a check for \$40.00.
- The Commissioner is hereby authorized to charge any additional fees which may be required or credit any overpayment to Deposit Account No. 03-1664. THIS IS NOT AN AUTHORIZATION FOR PAYMENT OF ANY ISSUE FEES.

ADDRESS TO WHICH DOCUMENT SHOULD BE RETURNED AFTER RECORDAL BY PTO

7. Please return the recorded document to:

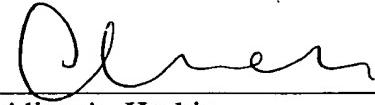
CHIRON CORPORATION
Intellectual Property - R440
P.O. Box 8097
Emeryville, California 94662-8097
United States of America

STATEMENT BY THE PARTY

8. I hereby submit that, to the best of my knowledge and belief, the foregoing information contained herein is true and correct and any copy submitted herewith is a true and correct copy of the original document.

Respectfully submitted,

Dated: 6 July 2021

By: 
Alisa A. Harbin
Attorney for Assignee
Reg. No. 33,895

CHIRON CORPORATION
Intellectual Property - R440
P.O. Box 8097
Emeryville, California 94662-8097
(510) 923-2708
(510) 655-3542 (Fax)

Total number of pages comprising cover sheet: 5 (Cover Letter plus Original Assignment)

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PATENT

ASSIGNMENT

WHEREAS, WE, MICHAEL HOUGHTON, MARK SELBY, SERGIO ABRIGNANI,
JENS HEILE AND DEREK O'HAGAN

hereinafter referred to as *ASSIGNORS*, have invented certain new and useful improvements as described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: ELICITING HCV-SPECIFIC ANTIBODIES

Date of Execution: Filing Date: December 1, 2000
Serial No. 09/728,423

WHEREAS, CHIRON CORPORATION, 4560 Horton Street, Emeryville, California 94608-2916, a corporation of the State of Delaware, hereinafter referred to as *ASSIGNEE*, is desirous of acquiring the entire right, title and interest in the above invention and application and in any Letters Patent which may be granted on the same;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for and in consideration of the sum of One Dollar (\$1.00) lawful money paid to **ASSIGNORS** by **ASSIGNEE**, receipt of which is hereby acknowledged, **ASSIGNORS** have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said **ASSIGNEE**, and **ASSIGNEE'S** successors and assigns, all right, title and interest in and to the said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions (including conversions claiming priority under 35 U.S.C. §119(e)), reissues, prolongations or extensions thereof, the said interest to be held and enjoyed by said **ASSIGNEE** as fully and exclusively as it would have been held and enjoyed by said **ASSIGNORS** had this assignment and transfer not been made, to the full end and term of any Letters Patent.

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PATENT
Atty. Dkt. No. 1618.003

ASSIGNORS further agree that they will, without charge to said **ASSIGNEE**, but at **ASSIGNEE'S** expense, cooperate with **ASSIGNEE** in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as **ASSIGNEE** lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said **ASSIGNEE**, or **ASSIGNEE'S** successors and assigns.

IN TESTIMONY WHEREOF, ASSIGNORS have hereunto signed their name to this assignment on the dates indicated below.

DATE _____

Michael Houghton

DATE _____

Mark Selby

DATE 6.21.01

Derek O'Hagan



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ASSIGNMENT BRANCH



CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Alameda

} ss.

On 06/21/01, before me, Gyne Riser

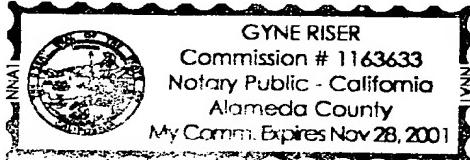
Date

Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared --Derek O'Hagan--

Name(s) of Signer(s)

- personally known to me
 proved to me on the basis of satisfactory evidence



Place Notary Seal Above

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Assignment 1618.003

Document Date: June 21, 2001 Number of Pages: -Two-

Signer(s) Other Than Named Above: None

Capacity(ies) Claimed by Signer

Signer's Name: _____

Individual

Corporate Officer — Title(s): _____

Partner — Limited General

Attorney in Fact

Trustee

Guardian or Conservator

Other: _____

RIGHT THUMBPRINT OF SIGNER

Top of thumb here

Signer Is Representing: _____

ASSIGNMENT

**WHEREAS, WE, MICHAEL HOUGHTON, SHIRLEY WONG, KIM BERGER,
MARK SELBY, SERGIO ABRIGNANI, DOMENICO ROSA AND JENS HEILE**

hereinafter referred to as **ASSIGNORS**, have invented certain new and useful improvements as described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: ACTIVATION OF HCV-SPECIFIC CELLS

Date of Execution: Filing Date: February 25, 2000

Serial No: 60/185,055

WHEREAS, CHIRON CORPORATION, 4560 Horton Street, Emeryville, California 94608-2916, a corporation of the State of Delaware, hereinafter referred to as **ASSIGNEE, is desirous of acquiring the entire right, title and interest in the above invention and application and in any Letters Patent which may be granted on the same;**

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for and in consideration of the sum of One Dollar (\$1.00) lawful money paid to **ASSIGNORS** by **ASSIGNEE**, receipt of which is hereby acknowledged, **ASSIGNORS** have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said **ASSIGNEE**, and **ASSIGNEE'S** successors and assigns, all right, title and interest in and to the said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions (including conversions claiming priority under 35 U.S.C. §119(e)), reissues, prolongations or extensions thereof, the said interest to be held and enjoyed by said **ASSIGNEE** as fully and exclusively as it would have been held and enjoyed by said **ASSIGNORS** had this assignment and transfer not been made, to the full end and term of any Letters Patent.

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IN TESTIMONY WHEREOF, ASSIGNORS have hereunto signed their name to this assignment on the dates indicated below.

DATE 10/19/00

M Houghton
Michael Houghton

DATE 10/19/00

Shirley Wong
Shirley Wong

DATE 6/13/01

Kim Berger
Kim Berger

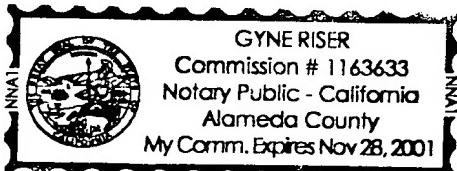
DATE 10/19/00

Mark Selby
Mark Selby
ms

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California }
County of Alameda } ss.

- personally known to me
 - proved to me on the basis of satisfactory evidence



to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Place Notary Seal Above

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Assignment 1618.002

Document Date: 10/10/99 Page Number: 19 of 20 Number of Pages: 2

Signer(s) Other Than Named Above: --*Kim Berger*--

Capacity(ies) Claimed by Signer

Signer's Name:

- Individual
 Corporate Officer — Title(s): _____
 Partner — Limited General
 Attorney in Fact
 Trustee
 Guardian or Conservator
 Other: _____

Signer Is Representing:

**RIGHT THUMBPRINT
OF SIGNER**
Top of thumb here

~~DO NOT FORWARD~~
TO
ASSIGNMENT BRANCH

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California }
County of Alameda } ss.

On June 13, 2001, before me, Gyne Riser
Date _____ Name and Title of Officer (e.g., "Jane Doe, Notary Public")
personally appeared --Kim Berger--

Name(s) of Signer(s)

- personally known to me
 proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Place Notary Seal Above

WITNESS my hand and official seal.

A handwritten signature of "Gyne Riser" over a horizontal line.

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Assignment 1618.002

Document Date: October 19, 2001 Number of Pages: -Two -

Signer(s) Other Than Named Above: Michael Houghton, Shirley Wong and Mark Selby

Capacity(ies) Claimed by Signer

Signer's Name: _____
 Individual
 Corporate Officer — Title(s): _____
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 Attorney in Fact
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 Other: _____

RIGHT THUMBPRINT
OF SIGNER

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Signer Is Representing: _____



JUNE 12, 2000

PTAS

CHIRON CORPORATION
4560 HORTON STREET
EMERYVILLE, CALIFORNIA 94608-2916
UNITED STATES OF AMERICA

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
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101321343A



UNITED STATES PATENT AND TRADEMARK OFFICE
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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 03/20/2000

REEL/FRAME: 010688/0107
NUMBER OF PAGES: 14

BRIEF: ASSIGNMENT OF ASSIGNEE'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNEE:
HOUGHTON, MICHAEL

DOC DATE: 03/09/2000

ASSIGNEE:
WONG, SHIRLEY

DOC DATE: 03/10/2000

ASSIGNEE:
BERGER, KIM

DOC DATE: 02/29/2000

ASSIGNEE:
SELBY, MARK

DOC DATE: 03/09/2000

ASSIGNEE:
ABRIGNANI, SERGIO

DOC DATE: 02/18/2000

ASSIGNEE:
ROSA, DOMENICO

DOC DATE: 02/21/2000

ASSIGNEE:
HEILE, JENS

DOC DATE: 02/27/2000

6/23/00
A184
1618.001

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010688/0107 PAGE 2

ASSIGNEE:

CHIRON CORPORATION
INTELLECTUAL PROPERTY-R440
EMERYVILLE, CALIFORNIA 94608-2916

SERIAL NUMBER: 60168234
PATENT NUMBER:

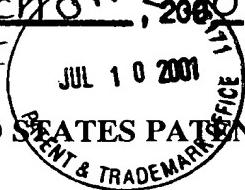
FILING DATE: 12/01/1999
ISSUE DATE:

MAURICE CARTER, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on this 15th day of March, 2001.
By Amanda L. Wilcox

JULY 10
5/20/01

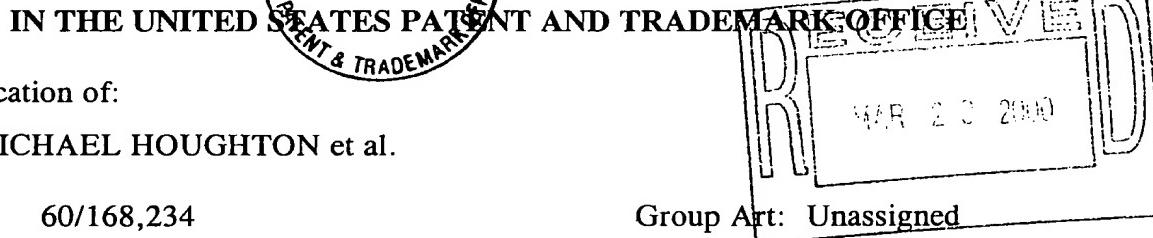


04 17-2000



101321343

Atty. Docket No. 1618.001 .70



In re Application of:

MICHAEL HOUGHTON et al.

Serial No.: 60/168,234

Group Art: Unassigned

Filed : December 1, 1999

Examiner: Unassigned

For : ELICITING HCV-SPECIFIC ANTIBODIES

ASSIGNMENT DOCUMENT COVER LETTER

Box Assignment

Assistant Commissioner of Patents and Trademarks
Washington, D.C. 20231

1. The accompanying assignment covers the patent or application identified above.

No other patents or applications are covered by the assignment.

Other patents and/or applications are covered by the assignment as shown on the attached LIST OF PATENTS AND/OR APPLICATIONS COVERED BY ASSIGNMENT.

NAMES OF PARTY MAKING TRANSFER

2. Name: Michael Houghton
Shirley Wong
Kim Berger
Mark Selby
Sergio Abrignani
Domenico Rosa
Jens Heile

IDENTITY OF PARTY TO WHOM TRANSFER IS MADE

3. Transfer is being made to:

2000 TTOM11 00000339 60168234

:581

40.00 OP

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Atty. Docket No. 12441.82670
Atty. Docket No. 1618.001

CHIRON CORPORATION
4560 Horton Street
Emeryville, California 94608-2916
United States of America

INTENTION OF DOCUMENT

4. The accompanying document is an:

Assignment License
 Security Interest Other

Execution Date: 02/18/00, 02/21/00, 02/27/00, 02/29/00, 03/09/00 and
03/10/00

FEE PAYMENT

5. Total fee due \$40.00

6. Charge Deposit Account No. 03-1664 in the sum of \$40.00.

Enclosed is a check for \$40.00.

The Commissioner is hereby authorized to charge any additional fees which
may be required or credit any overpayment to Deposit Account No. 03-1664.
THIS IS NOT AN AUTHORIZATION FOR PAYMENT OF ANY ISSUE
FEES.

ADDRESS TO WHICH DOCUMENT SHOULD BE RETURNED AFTER RECORDAL BY PTO

7. Please return the recorded document to:

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Intellectual Property - R440
P.O. Box 8097
Emeryville, California 94662-8097
United States of America

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Atty. Docket No. 12441.82670
Atty. Docket No. 1618.001

STATEMENT BY THE PARTY

8. I hereby submit that, to the best of my knowledge and belief, the foregoing information contained herein is true and correct and any copy submitted herewith is a true and correct copy of the original document.

Respectfully submitted,

By: Alisa A. Harbin
Alisa A. Harbin
Reg. No. 33,895

March 15, 2000

CHIRON CORPORATION
Intellectual Property - R440
P.O. Box 8097
Emeryville, California 94662-8097
(510) 923-2719
(510) 655-3542 (Fax)

Total number of pages comprising cover sheet: 14 (Cover Letter plus Original Assignment)

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PATENT
60/168,234
Attorney Docket No. 1618.001

ASSIGNMENT

*WHEREAS, We, Michael Houghton, Shirley Wong, Kim Berger, Mark Selby, Sergio Abrignani, Domenico Rosa and Jens Heile, hereinafter referred to as **ASSIGNORS**, have co-invented certain improvements as described and set forth in the below-identified application for International Application:*

Title of Invention: ELICITING HCV-SPECIFIC ANTIBODIES
Date of Execution: February 18, 21, 27, 29, 2000 and March 09 and 10, 2000
Filing Date: 01 December 1999
Serial No: 60/168,234

*WHEREAS, CHIRON CORPORATION, located at 4560 Horton Street, Emeryville, California 94608-2916, a corporation of the State of Delaware, hereinafter referred to as **ASSIGNEE**, is desirous of acquiring the entire right, title and interest in the said invention and application and in any Letters Patent which may be granted on the same;*

*NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for and in consideration of the sum of One Dollar (\$1.00) lawful money paid to **ASSIGNORS** by **ASSIGNEE**, receipt of which is hereby acknowledged, **ASSIGNORS** have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said **ASSIGNEE**, and **ASSIGNEE'S** successors and assigns, all right, title and interest in and to the said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions (including conversions claiming priority under 35 U.S.C. § 119(e)), reissues, prolongations or extensions thereof, the said interest to be held and enjoyed by said **ASSIGNEE** as fully and exclusively as it would have been held and enjoyed by said **ASSIGNORS** had this assignment and transfer not been made, to the full end and term of any Letters Patent.*

ASSIGNORS also agree that the U.S. serial number and the filing date may be entered above by **ASSIGNEE** or its agents upon designation of the serial number and the filing date by the U.S. Patent and Trademark Office.

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Attorney Docket No. 1618.001

ASSIGNORS further agree that they will, without charge to said **ASSIGNEE**, but at **ASSIGNEE'S** expense, cooperate with **ASSIGNEE** in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as **ASSIGNEE** lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said **ASSIGNEE**, or **ASSIGNEE'S** successors and assigns.

IN TESTIMONY WHEREOF, ASSIGNORS have hereunto signed their names to this assignment on the dates indicated below.

Date: 3/9/00
Inventor: M Houghton

Michael Houghton

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60/168,234
Attorney Docket No. 1618.001

ASSIGNORS further agree that they will, without charge to said **ASSIGNEE**, but at **ASSIGNEE'S** expense, cooperate with **ASSIGNEE** in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as **ASSIGNEE** lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said **ASSIGNEE**, or **ASSIGNEE'S** successors and assigns.

IN TESTIMONY WHEREOF, ASSIGNORS have hereunto signed their names to this assignment on the dates indicated below.

Date: March, 10, 2000

Inventor: Shirley Wong
Shirley Wong

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CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of

Alameda

} ss.

On March 10, 2003, before me,

Date

Amanda Denise Wilcox

Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared Shirley Wong

Name(s) of Signer(s)

personally known to me

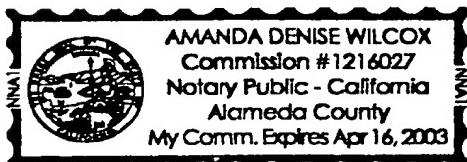
proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Amanda Denise Wilcox

Signature of Notary Public



Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

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Capacity(ies) Claimed by Signer

Signer's Name: _____

- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____

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Signer Is Representing: _____

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60/168,234
Attorney Docket No. 1618.001

ASSIGNORS further agree that they will, without charge to said **ASSIGNEE**, but at **ASSIGNEE'S** expense, cooperate with **ASSIGNEE** in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as **ASSIGNEE** lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said **ASSIGNEE**, or **ASSIGNEE'S** successors and assigns.

IN TESTIMONY WHEREOF, ASSIGNORS have hereunto signed their names to this assignment on the dates indicated below.

Date: 2/29/00

Inventor: Kim Berger
Kim Berger

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of

Alameda } ss.

on Feb. 29, 2000, before me, Amanda Denise Wilcox,
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")
personally appeared Kim Berger,
Name(s) of Signer(s)

personally known to me

proved to me on the basis of satisfactory
evidence

to be the person(s) whose name(s) is/are
subscribed to the within instrument and
acknowledged to me that he/she/they executed
the same in his/her/their authorized
capacity(ies), and that by his/her/their
signature(s) on the instrument the person(s), or
the entity upon behalf of which the person(s)
acted, executed the instrument.

WITNESS my hand and official seal.

Amanda Denise Wilcox

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document
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Signer's Name: _____

- Individual
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- Partner — Limited General
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- Guardian or Conservator
- Other: _____

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60/168,234
Attorney Docket No. 1618.001

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IN TESTIMONY WHEREOF, ASSIGNORS have hereunto signed their names to this assignment on the dates indicated below.

Date: 3/9/00

Inventor: Mark Selby

Mark Selby

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Alameda

} ss.

On March 9, 2000, before me, Amanda Denise Wilcox
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")
personally appeared Michael Houghton & Mark Selby.
Name(s) of Signer(s)

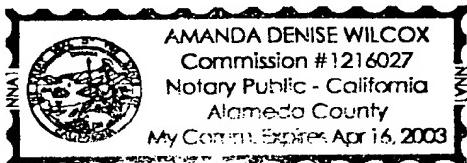
- personally known to me
 proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Amanda Denise Wilcox

Signature of Notary Public



Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

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- Individual
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Signer Is Representing: _____

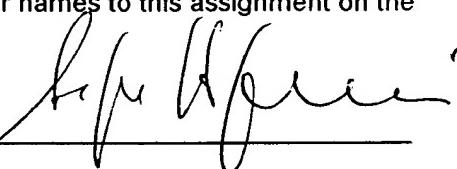
PATENT
60/168,234
Attorney Docket No. 1618.001

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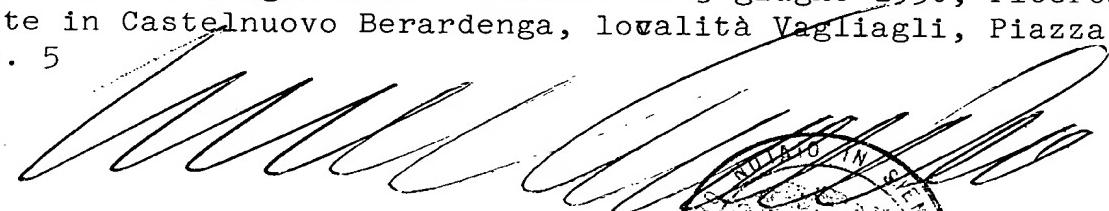
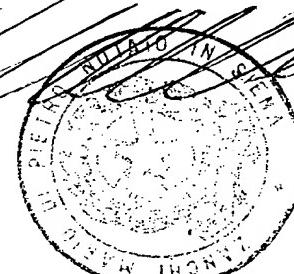
IN TESTIMONY WHEREOF, ASSIGNORS have hereunto signed their names to this assignment on the dates indicated below.

Date: February 18, 2000

Inventor:


Sergio Abrignani

Abrignani Dottor Sergio nato a Marsala il 3 giugno 1958, ricercatore residente in Castelnuovo Berardenga, località Vagliaglia, Piazza Fabbrini n. 5

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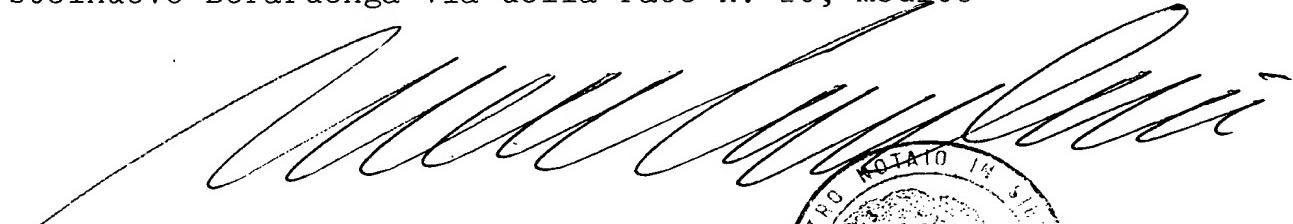
IN TESTIMONY WHEREOF, ASSIGNORS have hereunto signed their names to this assignment on the dates indicated below.

Date: February 21, 2002

Inventor: Domenico Rosa

Domenico Rosa

Rosa Domenico nato a Napoli il 20 agosto 1959, residente in Castelnuovo Berardenga Via della Pace n. 20, medico




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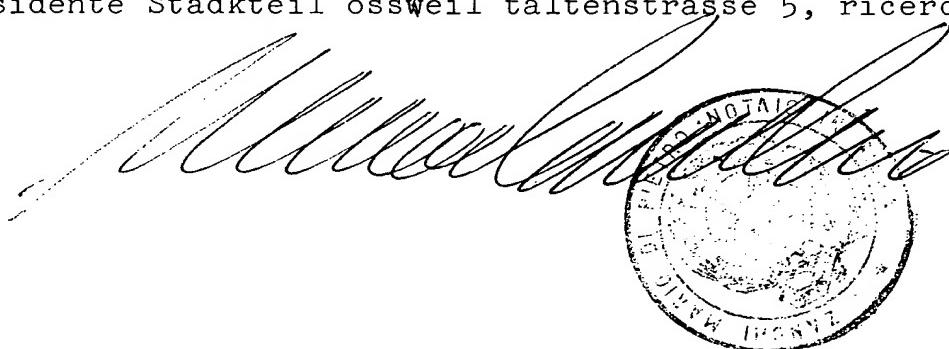
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IN TESTIMONY WHEREOF, ASSIGNORS have hereunto signed their names to this assignment on the dates indicated below.

Date: February, 21, 2000

Inventor: JH
Jens Heile Jens-H. Heile
MARTIN

Jens Martin Heile nato a Ludwigsburg (Germania) il 27 febbraio
1968 ivi residente Stadtkteil Ossweil Taltentstrasse 5, ricercatore
biologo

A large, handwritten signature of "Jens Martin Heile" is written over a circular notary seal. The seal contains the text "NOTARIALE", "LUDWIGSBURG", and "1968".